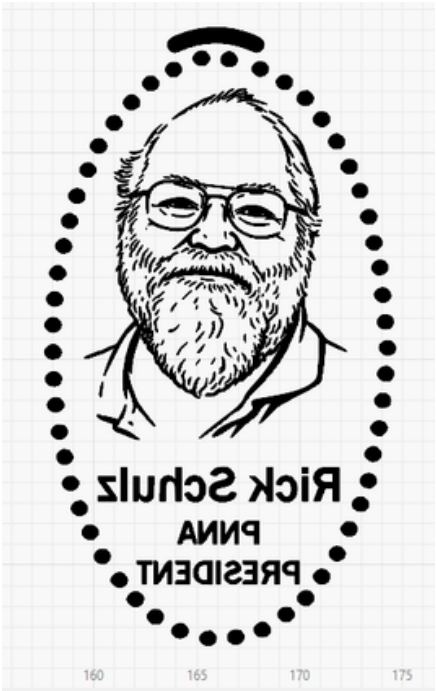
# My Quest For A Personalized Elongated Coin by Jay DeBoer

My first real introduction to elongated coins—beyond the ones I bought from vending machines as a kid—was at the Washington State Fair. Rick Schulz had the "penny squisher" set up there, and while volunteering in the booth, I had the chance to run the machine myself and press a few cents.

The next spark came at the Lacey Fun Fair. Rick was there with the machine again, and we ended up talking about the dies used to create the designs. That conversation is what really started my quest. A die is simply an engraved, mirror-image version of the artwork you want on the coin. The magic happens when the cent is pulled through the rollers—one of which acts as the die (or sometimes both, for double-sided designs).

I remember thinking how great it would be to have my own custom elongated coin. Then, I looked into the machinery. A manual hand-crank model like the one used by the PNNA runs about $2,500. The fancier electric models found at roadside attractions can cost anywhere from $6,000 to over $10,000. That's a steep price tag just to make a personalized elongated cent.

Older cents work best for elongated coins: U.S. cents minted **before 1982** are mostly copper, containing **95% copper** and 5% zinc or tin. In contrast, cents made from mid-1982 onward consist of 97.5% zinc with only a thin 2.5% copper plating.




So the quest began. I set out to create my own elongated coin, starting with a design to experiment with. Since Rick is the one who sparked this whole adventure, I decided he should be the subject of my first test piece.

I created the artwork in Photoshop, and from there, it gets transferred onto the steel die for engraving. Crucially, the image has to be reversed so it engraves as a proper mirror image on the die—an essential step for producing a clean, readable elongated coin.

# My Quest For A Personalized Elongated Coin - continued

At the time, the only material I had on hand was a set of nickel blanks. Nickel isn't the hardest metal, but it was what I had, and I was eager to try. I engraved the design into the nickel, and for a first attempt, it actually came out pretty well.

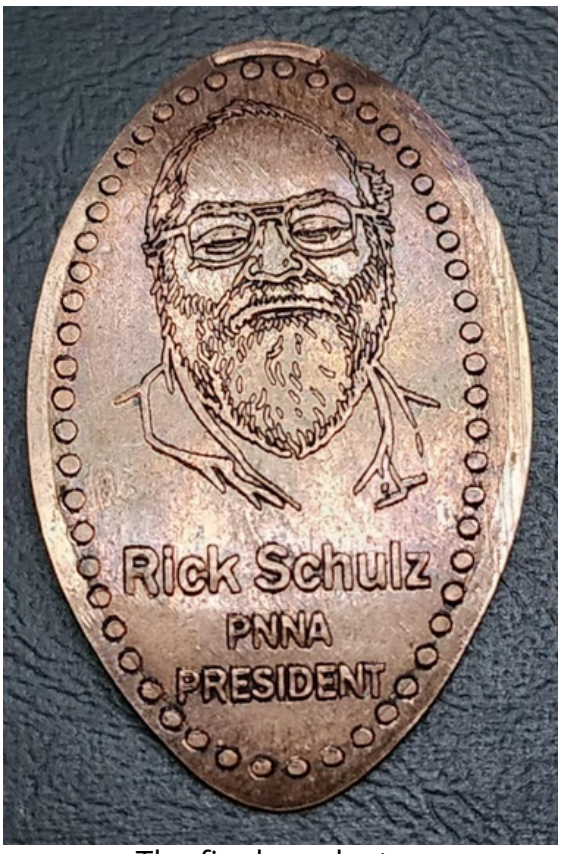
I ran the die through the compression process (more on that later), and the result did look like an elongated coin… except for one small issue: I spelled Rick's name wrong. Since it was only a test, I'll just claim that as a natural part of the learning curve.

Next, I ordered some steel and waited for it to arrive. When it showed up the following day, I engraved the same design into the steel and ran another test. The steel die performed much better, but the raw material had surface imperfections that transferred onto the coin, giving it a faint wood-grain texture. For the subsequent attempt, I polished the steel thoroughly before engraving, which produced a much cleaner result.

The actual "squishing" process took some experimenting as well. I used a manual rolling mill to run the cent and the die through together, adjusting the position, tension, and feed technique until I found the sweet spot. In the end, it produced a surprisingly good, homemade elongated coin.

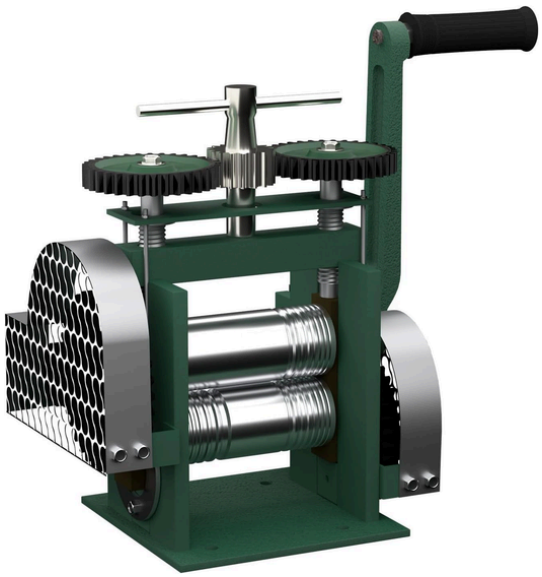
The process is a bit tedious, but when you compare the staggering cost of a commercial machine to the time put into making your own, I think it was well worth the effort—and a whole lot of fun.

Nickel material test die




The final product

The steel test die

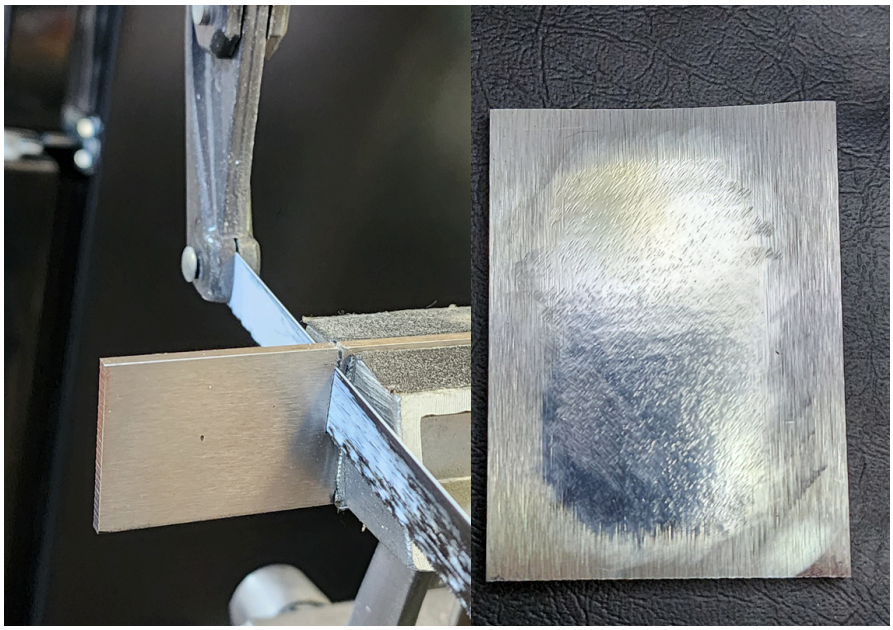


The manual rolling mill

# My Quest For A Personalized Elongated Coin - The Process

The first step in the process is to cut the steel flat bar to size using a hacksaw. Once it is cut, file the edges down to remove any sharp burrs. Next, polish the steel flat bar thoroughly to remove the "manufacturing grain" and give the die a perfectly smooth surface for the copper cent.

Now the die is ready to receive the engraving. There are plenty of ways to engrave steel, so simply pick your favorite method—whether that is hand engraving, laser engraving, CNC milling, rotary engraving, pneumatic engraving, or chemical etching.



The final step to all of this is to match a copper cent to your die and run them through the rolling mill to transfer your design onto the coin.

Pro Tip: Once your graphic is completely designed, do not forget to flip or "mirror" the image before you begin engraving. Remember, the die must be a perfect mirror image of what you are actually pressing. If you skip this step, you're going to waste a massive amount of time on a useless piece of steel. Don't ask me how I know this... It sounds obvious, but it is really easy to forget to mirror your image... oh, and double check your spelling too.